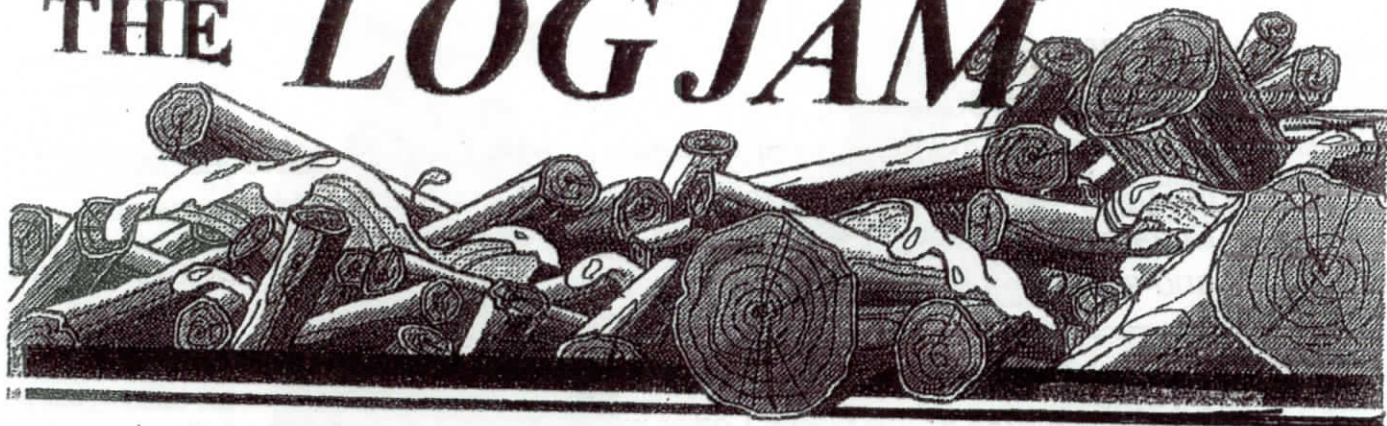


THE LOG JAM



Published by the Woodlot Association of Alberta (WAA)

June 2020

Fellowship

(We're in this altogether)

*When a feller hasn't got a cent
And is feelin' kind of blue,
And the clouds hang thick and dark
And won't let the sunshine thro',
It's a great thing, oh my brethren,
For a feller just to lay
His hand upon your shoulder
in a friendly sort o' way
It makes a man feel queerish,
It makes the tear-drops start.
And you kind o' feel a flutter
In the region of your heart.
You can't look up and meet his eye,
You don't know what to say
When a hand is on your shoulder
in a friendly sort o' way
Oh this world 's a curious compound
With its honey and its gall;
Its cares and bitter crosses,
But a good world after all,
And a good God must have made it,
Leastwise that is what I say,
When a hand is on your shoulder
in a friendly sort o' way*



Our Mission Statement

"The Woodlot Association of Alberta's purpose is to promote leadership in sustainable forest management by encouraging the development of Private forest by increasing awareness of their inherent social, economic and environmental values."

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From the “Log Cabin” to “These”

Toronto Tree Tower ▶ by Penda

This design proposal is for an 18-storey residential tower constructed of prefab modular CLT panels, with abundant patio garden spaces to create a tower of greenery; plans for construction have not been announced. Penda co-founder Chris Precht also proposed The Farmhouse, a modular mass timber high-rise concept with integrated greenhouses.



◀ QMUNITY by ZGF Architects

In Vancouver, social housing and commercial space will be housed in a 17-storey mass timber building that is aiming for Passive House certification.



Walmart ▶ Headquarters by Gensler with Fast + Epp

A 350-acre office campus in Arkansas will feature more than 2 million sq.ft. of mass timber construction, with completion in phases between 2020 and 2024.



▶ Canada Earth Tower by Perkins and Will

A proposal to build a CLT-hybrid, 340,000-sq.ft. mixed-use tower up to 40 storeys tall in Vancouver was announced last spring; there were no further updates as of press time.



◀ 77 Wade Avenue by Bogdan Newman Caranci (now BNKC Architecture + Urban Design)

This will be Toronto's first NLT building,

a hybrid of timber, concrete and steel. With seven storeys, it also aims to become Canada's tallest mass timber commercial structure.

Yes this is quite a stretch to see what advances have taken place in the technology of manufacturing, chemical and architecture. When one looks back at what we built with wood from the round log and 2X4 frame buildings. The big change has been the development of, Glued Laminated Timber (GLT), Cross Laminated Timber (CLT), Laminated Veneer Lumber (LVL), and Nail Laminated Timber (NLT). All of these use a large amount of forest, the question comes to the fore can our forest sustain the demands to be made on them.

With the use of timber being increased, there is opportunity for the woodlot owner to increase the product of their forest by use of stand improvement methods. It was for this very reason that we made application to FRIAA for FRIP funding to increase forest on private land. Unfortunately some forest industry who govern the release of FRIP funds have not “yet” seen the advantage of growing more forest on private land in the Province, for long term timber supply.

Thanks to climate change and wetter weather, forest soils are absorbing less methane

Shrinking methane sinks, in the country and the city

At the Baltimore Ecosystem Study site, researchers monitored forests at four urban and four comparatively rural sites from 1998-2016. At Hubbard Brook Experimental Forest, soil methane uptake was measured at eight forested sites from 2002-2015. These measurements comprise the longest-running record of methane uptake by forest soils.

Over an 18-year period, methane uptake by urban forests in Baltimore declined by 62%; methane uptake by rural forests declined by 53%. At Hubbard Brook, over a 14-year period, methane uptake by forest soils fell by 74-89%.

During this timespan, average temperature and atmospheric methane concentrations increased while nitrogen deposition decreased. These three factors should have caused an increase in forest soil methane uptake.

Scaling up: A global perspective

The authors analyzed 317 peer-reviewed journal articles on soil methane uptake in the world's forests published between 1987 and 2015. These records were used to estimate mean methane uptake in forests in 30° latitude bands across the globe—with the goal of examining changes in precipitation and methane uptake in the context of latitudes.

During the timeframe of the analysis, methane uptake by forest soils dropped by 77%. Declines were most acute in forests located between 0-60°N latitude, where precipitation has steadily increased as a result of climate change.

Methanotrophs matter

Why is methane uptake in forest soils reduced when soils are wetter? The answer lies in soil bacteria. Well-drained upland forest soils are home to methane-consuming bacteria called methanotrophs. These bacteria need access to methane in the atmosphere to survive. When soils are wet, diffusion of atmospheric methane into the soil is inhibited, reducing bacterial uptake.

Farming, energy production, and landfills produce methane, a potent greenhouse gas. Forests can remove methane from the atmosphere through the activity of soil bacteria. But increasing precipitation—a symptom of climate change—is making it harder for forest soils to trap greenhouse gases, creating a feedback loop that exacerbates global warming.

So reports a new study, published today in the *Proceedings of the National Academy of Sciences*, which concludes that forest soils have been overestimated as methane sinks by upwards of 50% worldwide. Few studies have quantified this process using long-term data.

Study coauthor Peter Groffman, a Senior Research Fellow at Cary Institute of Ecosystem Studies and a professor at the City University of New York Advanced Science Research Center at the Graduate Center, explains, "We were interested in how methane uptake by forest soils was influenced by environmental change. Do things like soil temperature, nitrogen, or rainfall impact forest soil's ability to act as a methane sink? And how does this play out over time?"

The Takeaway

Data on forest soil methane uptake was collected from two very different US National Science Foundation funded Long-Term Ecological Research sites. Hubbard Brook Experimental Forest is located in the White Mountains of New Hampshire, while the Baltimore Ecosystem Study encompasses Baltimore County, Maryland. Monitoring was conducted for 14 and 18 years, respectively.

Patterns observed at these locations were compared to global forest soil methane uptake data recorded from 1988-2015. Results were clear: methane absorption by upland forest soils is declining globally, especially in regions where precipitation is increasing.

"These findings suggest that global budgets for atmospheric methane—which are used to inform policy around methane-producing activities—are overestimating the role that forest soils play in trapping gas," Groffman cautions. "Declining methane uptake by forest soils should be factored into these models to avoid exacerbating climate warming, as methane in the atmosphere may rise more quickly and reach higher levels than current models predict."

Accounting for wetter soils

Precipitation is projected to continue to increase due to climate change, further reducing forest soils' capacity to mitigate rising atmospheric methane emissions.

Lead author Xiangyin Ni of Sichuan Agricultural University notes, "Long-term changes in precipitation and forest soil methane uptake should be factored into models being used to inform policy decisions around methane-producing activities—to ensure that we're using the most accurate tools available to account for methane sources and sinks."

Steve Hamburg, Chief Scientist at the Environmental Defense Fund, explains, "It is increasingly clear that reducing human-caused methane emissions is essential to reducing the risk of climate change. Towards that end, we need a better understanding of the global methane budget and the causes of the increases in atmospheric concentrations. Understanding that the global forest soil sink is weakening is a potentially important piece of the puzzle."

"This study shows large, long-term declines in the ability of soil to absorb methane," says Doug Levey, a director of the National Science Foundation's Long-Term Ecological Research program, which funded the research. "That can explain why the amount of methane, a potent greenhouse gas, has been increasing in the atmosphere. The results uncover an important link among the soil, the atmosphere, and climate."

Groffman concludes, "We can't rely on natural processes to solve our greenhouse gas problems. Just as trees and oceans may not always be able to absorb carbon dioxide, forest soils may not always be able to take up methane and keep it out of the atmosphere. Long-term data are critical for showing how the capacity and function of Earth's ecosystems are changing—and how we might best respond through management actions."

Good judgment comes from experience, and a lot of that comes from bad judgment — Will Rogers

Editorial

Jurgen

Here I am again doing the Log Jam for the month of June, you may well wonder what is going on as I had in the March issue declared that I was resigning from the position of editor of the Log Jam

Now let me explain what happened that I am doing the June issue. The Board of Directors had a conference call meeting on March 30th which I attended as I am still a member of the Board of Directors. The meeting went along fine until the question came up "*who is the new Editor of the Log Jam*" the answer was no-one had volunteered so it looked like there would not be a June issue. So several or maybe just one said "*Jurgen you should just keep doing it cause you are doing such a good job*" and most of the board said -ya - unhum and other affirmative sounds. So hearing this my whole body started to tingle right down to my toes, so I agreed to do the June Log Jam.

Well later that evening when I was putting away my papers I thought of what had happened and why did I offer to do the June Log Jam. I tried to tell myself that it was solely for patriotic reason as I did not want to see the WAA fail in producing the news letter. Then I thought of what really happened I realized that the tingling I had experienced was my ego, my ego where did that come from, what a surprise.

I knew that I had a very small ego, like most people have but it had always been buried deep within me. So what happened, was that the stroking by ten members of the board made my ego over active, which made me agree against my better judgement. Therefore be fore-warned Board Members I have had a very serious talk with my ego and it has been put back in its box, so stroking will not work again.

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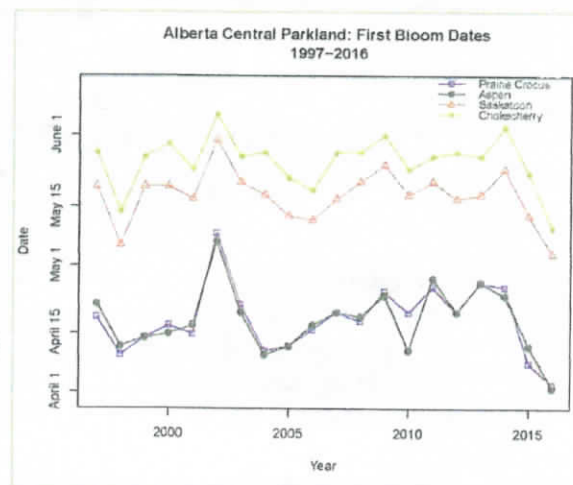
The 'Eyes of Science' - Alberta PlantWatch

As plants and insects develop in spring in response to increasing temperature, their appearance and timing is linked and predictable. We can use the bloom time of a common plant to predict when an insect pest will emerge. Bloom time of saskatoon (*Amelanchier alnifolia*) can be used to predict when gypsy moth and spruce budworm emerge (Coincide, 1989). Dr. Kevin Judge (MacEwan University, Edmonton) studies hump-winged grigs in the foothills; their breeding season seems to coincide with saskatoon flowering time. The grigs' calls (stridulations) are often heard then, and thus the bloom dates might help predict when grigs can be observed.

In a past project with Dr. Ken Fry, we found that the best plant event to indicate when to catch the woolly elm aphid as it moves down the stems of saskatoons or apples into the soil, was blooming of northern bedstraw (*Galium boreale*).

I have coordinated Alberta PlantWatch for 3 decades, encouraging volunteers to observe and report flowering and leafing times for selected plant species. This study of the timing of life cycle events is called 'phenology'. The date when flowers appear in spring is controlled by how much heat they have been exposed to, and our warming winters and springs have sped up plant development. For instance, in central Alberta aspen poplar and prairie crocus are blooming 2 weeks earlier over 7 decades (1936 to 2006). Over those years, February mean minimum temperatures warmed by 6 °C!

While the date of the first sign of spring (aspen pollen-shed) can vary by at least a month from a very late year (2002 on graph) to a very early year (2016), the sequence of plant events is predictable from year to year. For example, in central Alberta aspen and prairie crocus bloom around mid-April (average timing 1987 to 2006) and saskatoon in mid-May. Chokecherry follows about 9 days later, followed by common purple lilac May 30 and lodgepole pine May 31.



Using plant timing to choose the best time to control insects can help minimize effort and expense because insects can be caught at the precise emergence time or instar stage. Plant phenology is also useful to predict the end of the spring fire danger period in forests. When the canopy greens up, transpiration and humidity increase and fire risk drops.



Crocus Photo: Irene Crosland

Observing for PlantWatch is easy. For information on the plants and stage descriptions, see Canada PlantWatch www.plantwatch.ca, and my older site plant-watch.naturealberta.ca (the latter has more photos and info on wildlife and indigenous uses of plants but is missing some species). Choose a plant and location where you can see it



Saskatoon Photo: Charles Bird

every day. Maybe add a tag to help you observe the same plant over time. When the flower buds open that day is first bloom. Mid-bloom is when about half of the buds have opened. Leafing is when the first leaf has unfurled in 3 different spots on the tree.

Observing and reporting dates for even one plant is very helpful. Send your dates in by email or mail using our standard data sheet. You can also submit electronically on the www.plantwatch.ca site but due to FOIP issues I am unable to communicate with observers. I am working on an Alberta web reporting system.

We now have over 57,000 records on plant timing in Alberta, going back to 1987. This extensive baseline shows how common plants are reacting to our increasingly variable climate. Phenology is a useful tool to manage future risk, i.e. to better manage the impacts of heat, drought and insects. As Jacques Regnière said at the SERG meeting last February "There will be insect surprises in the future!"

Elisabeth Beaubien —Alberta Plant Watch

President Report

Laval Bergeron

Hello everyone,

To start off on a good note we have received a letter from the Minister of Agriculture and Forestry, Devin Dreeshen congratulating and encouraging the Association for the good work it's doing at promoting private woodlots, meaning the province supports us, with words anyway. We will see where it takes us.

I hope by now everyone knows that the AGM has been postponed until further notice. At this point it will most likely be in October...

Our x Editor, Jurgen Moll, for the Logjam has agreed to produce one more edition which is the one you are reading now. From now on it will be a different format but not sure yet how it will look. We have had one application for the position but the Board has agreed to keep looking, not because he would not have been able to do a good job but because we could not afford, right now anyway.. and so if anyone wants to put his writing skills together, now is a good time.

Also the secretarial position for the Board meetings is still open, another great venue to practice your writing skills:)

As well, a long standing Board member has decided to step down for personal reason and there is a venue where you can and would be practicing your social skills in the company of nine other knowledgeable, outgoing, smart, conscious people in the " Woodlot "

It's the 14th of May this morning, 1/2 done seeding, -4 with an inch of snow and so all activities have stopped which gives me time to write this report. If it's 'bland' you can blame it on the lack of sleep!!

Working Forest – Why Not on Your Woodlot?

Are you one of the many who, for a number of reasons, are not as active in their forest as they could be? Whether you own 10 acres, 100 acres or 1,000 acres it is possible to have a working forest. A working forest is generally defined as a managed forest, where objectives for the forest have been developed by the landowner and a process is in place and activities carried out to ensure these objectives are met. The woodlot provides long-term multiple benefits to the owner, society and future generations.

Let's take a look at some of the reasons you may have for not managing your woodlot as a working forest.

Have you seen some treatments that have left you with a bad impression?

It could be work that was not properly planned or carried out, or there could be good reasons for what was done. Either way, it is good to ask questions to increase your understanding of what was done, and why, so you can decide what is right for your property. Generally, working forests are being well managed with lots of care and thought put into carrying out forest management operations. In most areas there are demonstration forests that you can visit to see examples of good forest management activities.

You don't feel you have the technical skills?

There are a lot of factors to consider in managing a forest. Getting some technical expertise to help you make sense of what is important on your woodlot can be very helpful. Knowing your own objectives is most important. In all provinces there are resources available to landowners. They provide information, guidebooks



and workshops, while some provide free on-site technical advice or financial assistance. A quick call to your provincial department of forestry or natural resources or to a provincial woodlot organization should get you the information you need to get started on your path towards a well managed "working forest". If you are used to working with a computer or can get a son or daughter to help, the World Wide Web

is an excellent resource. Conducting searches using such key words as private forest management, family forests and woodlot management will provide ample material to help you get started.

You think that leaving it alone is the best way to address your values?

While this is a management approach, you won't know if it is the right one until you consider all the options. Many people believe protecting wildlife habitat is incompatible with growing trees for profit. On the contrary, timber harvesting is often the most economical way to enhance wildlife habitat. Scientists at the Audubon Society in New York State have proven conclusively that "taking out a few trees from time to time, or even taking out quite a number of trees, is a perfectly fine way to maintain quality habitat for woodland birds and other species". In other words "You can have your forest and log it too".

Not clear on the benefits of becoming involved?

Continuous Learning—Watching your forest grow and respond to different activities provides a valuable experience for you and your family. Your woodlot is like a living laboratory, with each year your management decisions get better.

Flora and Fauna—Your working forest can encourage diversity and a healthy forest that supports wildlife and plant populations.

Recreation and Aesthetics—A working forest will provide you with access to your woodlot, and open it up for recreational activities such as walking and cross-country skiing. What about the opportunity to get into maple syrup production, berry picking or to set up a campsite for you to enjoy?

Societal Values—The demand for forest products and other values that forests provide, such as clean air, water and habitat, is increasing. With woodlots being sold, subdivided and developed into housing lots and industrial parks there is increased pressure on remaining intact forestlands to provide these important environmental services. By ensuring that your forest is working at optimal levels you will be helping to create a healthier environment for your community.

Timber Production—Last but not least, a working forest has the potential to pay you handsomely for your efforts. It may produce much needed products to meet society's demand for wood and to provide local mills with a sustainable supply of wood. A greater percentage of forest products that come from a well managed woodlot, means fewer are coming from poorly managed properties.

Make a resolution to investigate this further. The costs are minimal in comparison to the rewards. Just remember it is you, working in concert with Mother Nature, that controls what happens to your woodlot.

Undiscovered Country

A year in the life of a newly off the grid woodlot owner

By David McGregor

Over the past year and a half I have submitted some updates about setting up an off the grid home in the woods in northern Alberta. Enough time (as well as trials) have passed now that I want to sum up what has made our endeavours a success.

The biggest questions always revolve around our power supply, heating, and overall costs. I'll do my best to break things down.

Our decision to use a cookstove to heat our house as well as do all of our winter cooking paid off beautifully. Our Esse Ironheart cookstove has been exceptional as both our furnace in the winter time as well as our cooking appliance. The most important thing about our stove is that it is built to be both a cookstove *and* a heating appliance. If you are relying on a cookstove for heating you need to make sure that the stove is built for that purpose, as many stoves will do a great job of roasting and baking but aren't really geared for long burns and high heat output.

The learning curve for cooking and baking in a cookstove is not nearly as steep as you might think. When you are directly responsible for fuelling the stove you are much more aware of how the temperature is changing in the oven. You gradually develop a feel for cooking and baking that is not tied so tightly to exact degrees in the recipe books.

Instead, the learning curve about firewood cutting, gathering, and storing has been much more gradual. At first we would only select completely dead standing spruce. It is only after a couple of season of burning and gathering firewood that I feel we have developed a keener eye for firewood. The spruce is great when you can find it, but we have found getting healthy dry white poplar is proving to be a more abundant and potentially cleaner burning source of wood. The trick is finding poplar that aren't too far gone with rot and then harvesting them when they are at their driest (late winter).

In terms of our power set up, I am frequently asked how much it has cost us to build and install solar power. Hot on the heels of those questions is always how long it will take to, "make our money back." There are two parts to this answer:

The cost of hooking up to the utility exceeded the cost of our solar equipment (roughly \$20k for our solar set up). So we have already made our money back and then some. The overall cost to build a new house with solar, propane and a well came in under \$200,000. This number is heavily dependent on being able to take on the learning and labour to do a large portion of the work yourself. I recommend that you hire an electrician to do your solar hookup and make sure that your wiring is up to code. I should note that we gave up having a dryer and dishwasher in order to make a slightly smaller solar system work for us. Our solar array is 2kw, which is on the small side but has been more than adequate for our needs

The only major regret that we have experienced with our setup is that we did not anticipate the need to set up our home to be ready for electric vehicle charging. Our system can only accommodate 110v rather than the 220/240v that you need for stage 2 charging of an EV.

Though it is great living off the grid, I know several other households that have invested in a grid-tied solar set up. In my mind this makes the most sense. In our situation, once we charge up our battery bank our solar panels only harvest a small amount of power for the rest of each day (we are often charged up by mid-morning). If we were grid tied we would be harvesting the maximum amount that our panels could produce and selling the excess power back to the grid. This will not only cover the cost of the solar system in under 10 years, it will also mean that you are contributing clean energy to power your neighbours homes as well. If you consider the possibility of having an electric vehicle then you are generating your own fuel for your car or truck. Your solar array then extends beyond household use and the energy you use becomes more valuable to you than if you sell it back to the grid. Not to mention your house and vehicle are both powered by clean energy.

If I had to boil down my advice for someone I would say invest in good design, good materials, and good equipment. It is always possible to get by and in some ways it might be preferable to use more salvaged materials in your projects, but what I have seen is that living off the grid can be very rough if you don't set yourself up for success. If you decide to live without certain essentials (like good batteries or a less than adequate size of solar array) your experience will be tougher and be more work. Temporary fixes become the status quo very quickly. Cutting corners makes it hard to go back and fix them later.

One of the biggest realizations that I've had is that if you are purely concerned with money you are thinking about solar power and clean energy the wrong way. Crunching the numbers for payback vs whatever else can get in the way of enjoying your setup. While the numbers are there to support the financial merits of clean energy, I've learned that it is equally important to consider that you are playing a part in showing how we can transition to renewable options. Not to mention, it is also just really fun to know you are making your own power.

Apart from all these details, living in the woods has been a great experience for both of us. Like the way you develop an eye for firewood, you also find that your sense of other things becomes keener as well. I notice that I no longer just hear "birds," but I can differentiate the songs. Similarly I remember a time when black poplar and white poplar were indistinguishable to me, and now it is hard to imagine seeing them that way. I guess what I'm getting at is that living in the country and paying attention to what is going on around you can be like learning a new language. Your vocabulary for details in nature and seasons increases the more you pay attention.

Study of Old Wood to Tell of The Past

CHICAGO (WBBM NEWSRADIO) -- Wood from an old barn in Naperville may tell a story to scientists that gives them clues on how to better nurture the forests of today.

A team of scientists led by forest ecologist, Dr. Christy Rollinson PhD., visited the Greene Farm Barn in the Greene Valley Forest Preserve in Naperville on Monday and took more than a dozen core samples of timber from the barn.

Dr. Rollinson said the oak timbers date back from before the 1850's. She said scientists think the rings in some of those wood beams may hold clues about how the trees they came from weathered changes in climate and stressful events like fires.

"What we're able to see is, say a fire came through, and we expect the fire to have killed some trees in the area, but not others and so how that plays out and what we're able to see is we see the tree was growing, it was kind of stressed, but then all of a sudden it starts growing fast. And, so that means that, some of the competition, some of the other trees around it, disappeared," she said.

Dr. Rollinson said the 15 to 20 samples taken are seven or eight inches in length and about a dime's size in diameter.

"What we're hoping to do is use the annual rings from these old oaks so we can see how did oaks grow in the past....how often did a disturbance come through and use that information to help guide our management practices today," she said.

Dr. Rollinson said the rings should be able to tell the team how frequently the trees were stressed for multiple years at a time.

"In general, most trees (used in the barn) came from right outside. There's this great opportunity that we can compare, in the same location, the trees that were there before with the trees that are there now," she said.

Study results may be available in the next two or three weeks.

The trees used to make the barn will be compared with oaks in the area around the barn because it's presumed those trees were grown after the initial ones were cut down to make the barn and other structures on the farm.

Update on the Invasive Plant Survey and Control Program

During the summer, many of the forest health staff are in the field surveying for invasive weeds. As the summer season comes to an end, we are busy entering and submitting data and switching gears to our mountain pine beetle program.

Across the district, Canada thistle (*Cirsium arvense*) was noted as one of the most common weeds found. This was not overly surprising as this plant is a professional at propagating from its large root system and controlling it effectively can be challenging. Manual control (pulling them) is practically ineffective since the plant can regrow from broken off pieces of the root. Chemical control, on the other hand, can only be effective if the right herbicide is used. Non-selective herbicides, such as glyphosate simply burn off the leafy part of the plant, but the juicy taproot remains. Selective herbicides are effective, however the application must occur when the plant is transporting nutrients in the early spring and late fall.



Bull Thistle. Photo: B. Taylor

In the northern part of the province, there was a noticeable amount of yellow toadflax. At times, this noxious weed seemed to be as common as Canada thistle. In central Alberta, meadow hawkweed (*Hieracium caespitosum*), a prohibited noxious weed, is gaining ground in Whitecourt. We hope that our rapid response and effective control will give us the upper hand in controlling both these weeds.

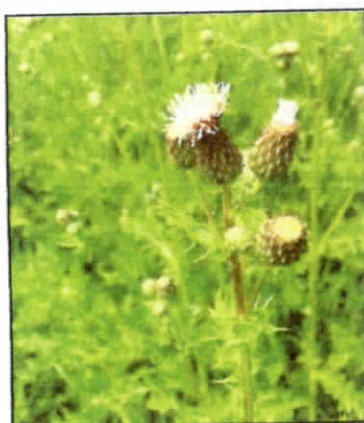
A notable plant that has popped up in Hinton and Whitecourt forest areas is bull thistle (*Cirsium vulgare*). Bull thistle is not listed under the *Weed Control Act*, however it is an alien species that does have the potential to behave invasively in the right conditions. This plant was found in the 2nd year of its lifecycle (as opposed to the rosette stage) and had large showy flowers (as seen in photo).

Some unique invasive weeds that have popped up in Alberta's forested area in the past couple years have been woolly burdock (*Arctium tomentosum*) in Slave Lake (2018), creeping bellflower (*Campanula rapunculoides*) in Peace River (2016), and knapweed (*Centaurea spp.*) in Hinton (2017). In addition, orange hawkweed has made appearances in various locations throughout the province over the past couple of years. Creeping bellflower and the knapweed plants have since been controlled, and have not been spotted in the same area since. The woolly burdock plants and orange hawkweed infestations have received treatment and will be monitored in the years to come.

Preventing the spread of invasive plants will reduce the severity of infestations. Informative talks about the importance of prevention have been incorporated in startup meetings with lookout tower personnel and Dozer bosses. In addition, some areas have really invested their time into engaging the public by attending events across the province. Ultimately, we hope that all the effort that goes into survey, control and public education will pay off in the near future and that Alberta will benefit from the increase in native biodiversity as a result of the reduction of alien species on the landscape.

FOREST AREA	TWO OF THE MOST COMMON WEEDS	
Whitecourt	1. Tall Buttercup	2. Meadow Hawkweed
Peace River	1. Perennial Sow Thistle	2. Canada Thistle
Hinton	1. Oxeye Daisy	2. Canada Thistle
Athabasca	1. Scentless Chamomile	2. Common Tansy
Slave Lake	1. Canada Thistle	2. Perennial Sow Thistle
Fort McMurray	1. Canada Thistle	2. Perennial Sow Thistle
Rocky Mountain House	1. Scentless Chamomile	2. Oxeye Daisy
Calgary	1. Canada Thistle	2. Oxeye Daisy

Some weeds that have been found in the Whitecourt Forest Area in 2018. Photos: B. Taylor



Canada Thistle



Scentless Chamomile



Common Tansy

Brittany Taylor - Whitecourt Forest Area

Postmedia's series on the Science of Summer goes for a walk in the woods today as Tom Spears asks how a research forest in Petawawa is looking south for new ways to resist the heat.

Future forests could still look like today's forests as the climate warms, but they may need a new set of genes.

Genetically, a pine tree in Ottawa is different from one in Pennsylvania. Each has adapted over time to its local climate.

And as the Ottawa Valley warms — especially as summers become hotter and drier — those southern pines may be the kind we need.

Then again, we might need to plant different tree species entirely. A third possibility: we can stay mainly with the trees we have now.

With all of these possible futures in the cards, Canada's foresters are starting a long-term experiment at the Petawawa Research Forest, testing various methods of adapting to climate change before it's too late.

They are holding a three-day workshop in Pembroke in mid-July for researchers, forest industry workers, including reps from the United States Forest Service and Colorado State University.

These two organizations are already running a study in five widely separated American forests. This long-term study, called Adaptive Silviculture for Climate Change (<https://www.adaptivesilviculture.org/>), will be coming next to the Petawawa Research Forest.

Of the U.S. sites, one in New Hampshire focuses on mixed hardwood forest, one in Minnesota looks at a red pine forest, and so on through other forest types.

"We would be the first (study site) in Canada, and our focus will be on white-pine-dominated forest, which is certainly characteristic of the Ottawa Valley and the Great Lakes region" said Mike Hoeping of the

Canadian Forest Service.

The study will cover a lot of forest — likely around 200 hectares, or two square kilometres — and divide this into four areas. In one area they change nothing from today's practices. At the other extreme, they plant a lot of species that are more suited to hot, dry summers — presumably trees from far south of here. "It probably won't look like the forest you started with."

In the two remaining sections they make some changes, but fewer than in the extreme-change site.

"These are different levels of manipulation to adapt the forest to changing conditions," he said.

There is no end-date for the study. Being in a research forest on Crown land gives scientists the luxury of being able to take the long view.

The areas that are managed with major changes may look different from today's forest, if new species of tree are brought in, Hoeping said. (Foresters call this "assisted migration" — the practice of moving trees north quickly as climate changes rather than waiting for centuries until trees catch up naturally.)

"It might be species that aren't even in the region now, or different mixes" of species, he said. "We haven't figured out specifically what these will be" for Petawawa.

Another technique is simply to plant the same species, but taking seedlings from different "seed zones."

In time, white pines (or maples or oaks) from hundreds of kilometres south of here might survive better here, given hotter conditions.

And not all trees will react equally. White pines are expected to do fairly well in a warmer climate, but red pine will have a harder time.

The Petawawa study is likely to get under way next year.

Up Coming Events

Board of Directors - Teleconference

June 29, 2020

July 27, 2020

August 31, 2020

September 28, 2020

All calls at 7pm

26th - ANNUAL GENERAL MEETING

When : Due to the Covid-19 it may be in October

Where: In Whitecourt, Alberta

Time : Registration 10.30, Call to order 11.00 to 5.00 pm

Fee : Per person is — \$ 25.00

Location : The Forest Interpretive Centre

The location is : on the south end of Whitecourt , take the last exit from Hwy.43 turn left follow the road to the gate for the centre.

This being the 25th anniversary of the our association, there will be some review of the past, with many of our early board members present. Followed by our future direction, financial report, a guest speaker, elections, and general discussion

LUNCH WILL BE SERVED ON SITE

What is a " Woodlot "

Webster's Dictionary defines a woodlot as : "**Woodlot - a piece of land on which trees are cultivated and cut**"

The term Woodlot is in common use in eastern Canada, whereas in western Canada it is used by few people. Why this is primarily because in the eastern Provinces there is privately owned forest land; ie.- PEI - 95% , NS - 68%, NB - 50%, of total forested land as compared to AB - 4%, B.C. - 3%.

Therefore it is quite evident that most Albertans have never heard or used the term woodlot. For when the media or others refer to Forests, they are speaking only about the 96% of forested land which is owned by the crown that is land leased out to large multi national corporations for the sole production of lumber, pulp, etc. Thus the 4% of private forested land as a woodlot are very seldom referred to.

Let us look at what a woodlot on private land really is. Webster is not wrong in stating it is "land on which trees are cultivated and cut" for all woodlots do indeed grow trees and at times harvest some.

But woodlots are much more than only the growing of trees.

They are a habitat for all forms of wildlife ranging from the very small animals such as squirrels and voles to the large moose, deer, elk, coyotes, plus a wide range of birds of all kinds.

They are a source of clean water as they retain and filter the water, plus reduce flooding by slowly releasing it, and aid in recharging the ground water aquifer.

They are a particularly valuable source of carbon sequestering.

They serve many as place for recreation and mental and physical health.

They are a source of a wide range of native berries from strawberries to saskatoons, and many different mushrooms.

They are a source of firewood for those who supplement their heating with a wood burning stove.

The list could go on and on but this is a taste of what private woodlots really are. If they are managed they can become an asset to any farm in particular in a largely predominantly agricultural area that has been cleared of its native forests.

My Woodlot

Valley of Hope Woodlot

—

Wilhelm and Cheri Vohs

Our woodlot started when my Dad bought 2 treed quarters in 1978 and 1979 that bordered to the north of our home quarter. He decided not to clear any of the land for farming, but to leave it treed for water retention and some grazing. Having just emigrated from north Germany we had a great appreciation for forested land, as it was diminished there due to the high population density and more intensive farming practiced to feed that population.

Dad started a mixed operation with cattle and grain and as our cattle numbers grew we soon figured out that high cattle density around trees will soon damage a forest. So we began fencing off trees that were around the building site and restricting cattle access to the woodlot. This has helped tremendously with wind protection around our yard which was in return is extremely helpful at calving time. A cold wind will take a lot of energy out of livestock.

As far as we could find out the last logging on the woodlot took place in the 50's or 60's. When we went through BSE in the 2000's we decided to sell some standing timber in 2005 and took that money to buy a Woodmizer LT40 sawmill. We had been members of the Alberta Woodlot Association for quite a number of years already and attending their trade shows so we thought let's see if we can take a raw product and turn it into something more finished and Toso Bozik was a tremendous help with a woodlot management plan.

It has been a bit of a learning curve but a lot of fun and rewarding. We have sold some lumber over the years, but it is amazing how much we used ourselves with buildings and maintenance. We have cut about a couple of hundred thousand board feet of Spruce and Aspen through the mill, most of that came from our woodlot. We also do some custom cutting.

The trees are being cut with a chainsaw and skidded with our tractor to the yard. We concentrate on the big trees that are getting toward the end of their lifecycle and try to take them out with minimal disturbance.

About six years ago we sold our cow herd and started custom grazing 160-180 cow calf pairs. Everything was turned into grass and we are also doing some reforestation on pastureland. We still get good grass and can grow trees at the same time with rotational grazing.

Today we are maintaining over 500 acres of treed land and supply living space for a large variety of wildlife and clean water while grazing cattle at the same time. We feel blessed living and working in such a beautiful country, our friends feel blessed as well because we don't mind sharing our property. We have been hosting the Valley of Hope Fun Fly and Pig Roast for over 30 years which is a model airplane gathering that draws remote control pilots and their families from all over Alberta and BC.

Photo's of Wilhelm and Cheri Vohs - Woodlot



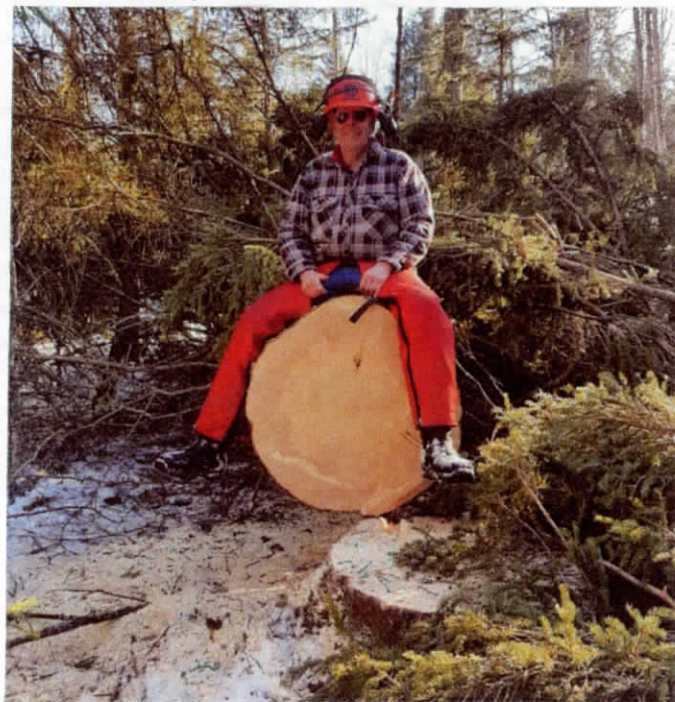
Pasture and trees, working well together



Our latest building project, All lumber milled on the farm



Wetland Project on the east end of our Woodlot



Taking the older ones first "100 year old spruce"